We claim:

1. A method of detecting a genetic predisposition in a human subject for non-responsiveness to statin drug treatment, comprising:

a) collecting a tissue sample from a human subject;

b) amplifying nucleic acids that include a non-coding or untranslated region within the 3' end of the human lipoprotein lipase gene from said tissue sample to obtain amplification products; and

c) analyzing the amplification products for homozygosity for a variant allele in a non-coding or untranslated region at the 3' end of the human lipoprotein lipase gene,

homozygosity for the variant allele indicating a genetic predisposition for non-responsiveness to treatment with a statin drug.

2. The method of Claim 1, wherein the tissue sample is a blood sample.

3. The method of Claim 1, further comprising restricting the amplification products with a restriction enzyme before analyzing the amplification products.

4. The method of Claim 3, wherein the restriction enzyme is *Hind*III.

5. The method of Claim 1, wherein an oligonucleotide primer is used in amplifying said nucleic acids.

6. The method of Claim 1, wherein the variant allele is in the HindIII recognition site in intron 8 or the $(TTTA)_n$ tetranucleotide repeat region of intron 6.

7. The method of Claim 1, wherein an oligonucleotide comprising the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) is used in amplifying said nucleic acids.

8. The method of Claim 1, wherein an oligonucleotide primer comprising the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

9. The method of Claim 1, wherein an oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) or 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

10. The method of Claim 1, wherein a reverse primer oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide

primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) are used in amplifying said nucleic acids.

11. The method of Claim 1, wherein an oligonucleotide primer is used in amplifying said nucleic acids, said primer comprising a nucleotide sequence of (SEQ. ID. NO.:1), (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO..44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ ID. NO.:77), (SEQ. ID NO.:78), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

12. The method of Claim 1, wherein an oligonucleotide comprising the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) is used in amplifying said nucleic acids.

13. The method of Claim 1, wherein an oligonucleotide primer comprising the sequence 5'-ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34) is used in amplifying said nucleic acids.

14. The method of Claim 1, wherein an oligonucleotide primer having the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) is used in amplifying said nucleic acids.

15. The method of Claim 1, wherein an oligonucleotide primer having the sequence 5'-ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34) is used in amplifying said nucleic acids.

16. The method of Claim 1, wherein amplifying said nucleic acids is done using an

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oligonucleotide primer comprising a nucleotide sequence of (SEQ. ID. NO.:33), (SEQ. ID. NO.:34), (SEQ. ID. NO.:82), (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:86), (SEQ. ID. NO..87), (SEQ. ID. NO.:88), (SEQ. ID NO.:89), (SEQ. ID. NO.:90), (SEQ. ID. NO.:91), or (SEQ. ID. NO.:92), or a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

17. The method of Claim 1, wherein amplifying said nucleic acids is done using an oligonucleotide primer comprising a nucleotide sequence of (SEQ. ID. NO.:95), (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:100), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO..103), (SEQ. ID. NO.:104), (SEQ. ID. NO.:105), or (SEQ. ID. NO.:106), or a sequence overlapping the sequence of any of these with respect to its position on the Oka reference sequence.

18. The method of Claim 5, wherein said oligonucleotide primer is labeled with a fluorescent dye.

19. The method of Claim 18, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

20. The method of Claim 1, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

21. A method of detecting a genetic predisposition in a human subject for non-responsiveness to statin drug treatment, comprising:

a) collecting a tissue sample from a human subject;

b) amplifying nucleic acids that include the normal locus of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase gene (*LPL*) from said tissue sample to obtain amplification products; and

c) analyzing the amplification products for the absence of a *Hind*III recognition site in intron 8 of the human lipoprotein lipase gene,

homozygosity for an absence of said *Hind*III recognition site indicating a genetic predisposition for non-responsiveness to treatment with a statin drug.

22. The method of Claim 21, wherein the tissue sample is a blood sample.

23. The method of Claim 21, further comprising restricting the amplification products with a restriction enzyme before analyzing the amplification products.

24. The method of Claim 21, wherein the restriction enzyme is *Hind*III.

25. The method of Claim 21, wherein an oligonucleotide primer is used in amplifying said nucleic acids.

26. The method of Claim 21, wherein an oligonucleotide primer comprising the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) is used in amplifying said nucleic acids.

27. The method of Claim 21, wherein an oligonucleotide primer comprising the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

28. The method of Claim 21, wherein an oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ ID. NO. 1) or 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

29. The method of Claim 21, wherein a reverse oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) are used in amplifying said nucleic acids.

30. The method of Claim 21, wherein an oligonucleotide primer is used in amplifying said nucleic acids, said primer comprising a sequence selected from the group essentially consisting of (SEQ. ID. NO.:1), (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO..18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID NO.:39), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO.:44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID NO.:52), (SEQ. ID. NO..53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ. ID. NO..59), (SEQ. ID. NO.:60), (SEQ ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), (SEQ. ID. NO.:75), (SEQ. ID NO.:76), (SEQ. ID. NO.:77), (SEQ. ID. NO.:78), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

31. The method of Claim 25, wherein said oligonucleotide primer is labeled with a fluorescent dye.

32. The method of Claim 31, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

33. The method of Claim 21, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

34. A method of detecting a genetic predisposition for non-responsiveness to lovastatin treatment in a human subject with coronary artery disease, comprising:

a) collecting a tissue sample from a human subject;

b) amplifying nucleic acids comprising the *Hind*III restriction site in intron 8 of the human lipoprotein lipase gene (*LPL*) from said tissue sample to obtain amplification products; and

c) analyzing the amplification products for the absence of a HindIII recognition site in intron 8 of the human lipoprotein lipase gene,

homozygosity for an absence of said *Hind*III recognition site indicating a genetic predisposition in said human subject for non-responsiveness to lovastatin treatment for coronary artery disease.

35. The method of Claim 34, wherein the tissue sample is a blood sample.

36. The method of Claim 34, further comprising restricting the amplification products with a restriction enzyme before analyzing the amplification products.

37. The method of Claim 34, wherein the restriction enzyme is *Hind*III.

38. The method of Claim 34, wherein an oligonucleotide primer is used in amplifying said nucleic acids.

39. The method of Claim 34, comprising the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) is used in amplifying said nucleic acids.

40. The method of Claim 34, wherein an oligonucleotide primer comprising the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

41. The method of Claim 34, wherein an oligonucleotide primer having the

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sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) or 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

42. The method of Claim 34, wherein a reverse oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) are used in amplifying said nucleic acids.

43. The method of Claim 34, wherein an oligonucleotide primer is used in amplifying said nucleic acids, said primer comprising a nucleotide sequence of (SEQ. ID. NO :1), (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO :28), (SEQ. ID. NO.:29), (SEQ. ID NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO..40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO.:44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO..68), (SEQ. ID. NO.:69), (SEQ ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), (SEQ. ID. NO.:75), (SEQ. ID. NO.·76), (SEQ. ID. NO.:77), (SEQ. ID. NO.:78), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

44. The method of Claim 34, wherein said oligonucleotide primer is labeled with a fluorescent dye.

45. The method of Claim 44, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

46. The method of Claim 34, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

47. The method of Claim 34, wherein said human subject is a coronary artery bypass graft patient.

48. A method of detecting genetic predisposition in a CABG patient for non-responsiveness to statin drug treatment, comprising:

a) collecting a tissue sample from a CABG patient;

b) amplifying nucleic acids comprising the locus of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase (*LPL*) gene from said blood sample to obtain amplification products; and

c) analyzing the amplification products for the absence of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase gene, homozygosity for an absence of said HindIII recognition site indicating a genetic predisposition in said CABG patient for non-responsiveness to statin drug treatment for coronary artery disease.

49. The method of Claim 48, wherein said tissue sample is a blood sample.

50. The method of Claim 48, further comprising restricting the amplification products with a restriction enzyme before analyzing the amplification products.

51. The method of Claim 50, wherein the restriction enzyme is *Hind*III.

52. The method of Claim 48, wherein an oligonucleotide primer is used in amplifying said nucleic acids.

53. The method of Claim 48, comprising the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) is used in amplifying said nucleic acids.

54. The method of Claim 48, wherein an oligonucleotide primer comprising the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) is used in amplifying said nucleic acids.

55. The method of Claim 48, wherein an oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) or 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ ID. NO. 2) is used in amplifying said nucleic acids.

56. The method of Claim 48, wherein a reverse oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2) are used in amplifying said nucleic acids.

57. The method of Claim 48, wherein an oligonucleotide primer is used in amplifying said

nucleic acids, said primer comprising a sequence of (SEQ. ID. NO.:1), (SEQ. ID. NO.:2), (SEQ ID. NO.:3), (SEQ ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO. 29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO.:44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO..74), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ. ID. NO.:77), (SEQ. ID. NO..78), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

58. The method of Claim 52, wherein said oligonucleotide primer is labeled with a fluorescent dye.

59. The method of Claim 58, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

60. The method of Claim 48, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

61. A method of detecting genetic predisposition in a CABG patient for non-responsiveness to statin drug treatment, comprising:

a) collecting a tissue sample from a CABG patient;

b) amplifying nucleic acids comprising the normal locus of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase (*LPL*) gene from said blood sample to obtain amplification products, by using a reverse oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2); and

c) analyzing the amplification products for the absence of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase gene,

homozygosity for an absence of said *Hind*III recognition site indicating a genetic predisposition in said CABG patient for non-responsiveness to statin drug treatment for coronary artery disease.

62. The method of Claim 61, wherein said tissue sample is a blood sample.

63. The method of Claim 61, wherein said oligonucleotide primer is labeled with a fluorescent dye.

64. The method of Claim 63, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

65. The method of Claim 61, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

66. A method of detecting in a human subject a genetic predisposition for non-responsiveness to statin drug treatment for coronary artery disease, comprising:

a) collecting a tissue sample from a human subject;

b) amplifying nucleic acids comprising the normal locus of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase (*LPL*) gene from said blood sample to obtain amplification products, by using a reverse oligonucleotide primer having the sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1) and a forward oligonucleotide primer having the sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO. 2);

c) restricting said amplification products with *Hind*III; and

d) analyzing the restriction fragments for the absence of the *Hind*III recognition site in intron 8 of the human lipoprotein lipase gene,

wherein homozygosity for an absence of said *Hind*III recognition site indicates a genetic predisposition for non-responsiveness to statin drug treatment for coronary artery disease.

67. The method of Claim 66, wherein the tissue sample is a blood sample.

68. The method of Claim 66, wherein said oligonucleotide primer is labeled with a fluorescent dye.

69. The method of Claim 66, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

70. The method of Claim 66, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

71. A method of detecting a genetic predisposition in a human subject for non-

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responsiveness to statin drug treatment, comprising:

a) collecting a tissue sample from a human subject;

b) amplifying nucleic acids comprising the normal locus of the $(TTTA)_n$ tetranucleotide repeat sequence in intron 6 of the human lipoprotein lipase gene (*LPL*) from said tissue sample to obtain amplification products; and

c) analyzing the amplification products for $(TTTA)_n$ tetranucleotide repeat alleles present in said nucleic acids,

homozygosity for a $(TTTA)_n$ 4 allele indicating a genetic predisposition for non-responsiveness to treatment with a statin drug for coronary artery disease.

72. The method of Claim 71, wherein the tissue sample is a blood sample.

73. The method of Claim 71, wherein an oligonucleotide primer is used in amplifying said nucleic acids.

74. The method of Claim 71, comprising the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ ID. NO.:33) is used in amplifying said nucleic acids.

75. The method of Claim 71, wherein an oligonucleotide primer comprising the sequence 5'- ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ ID. NO.:34) is used in amplifying said nucleic acids.

76. The method of Claim 71, wherein an oligonucleotide primer having the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) or 5'- ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34) is used in amplifying said nucleic acids.

77. The method of Claim 71, wherein a reverse oligonucleotide primer having the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) and a forward oligonucleotide primer having the sequence 5'- ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34) are used in amplifying said nucleic acids.

78. The method of Claim 71, wherein amplifying said nucleic acids is done using an oligonucleotide primer comprising a nucleotide sequence of (SEQ. ID. NO.:33), (SEQ. ID. NO.:34), (SEQ. ID. NO.:82), (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:86), (SEQ. ID. NO.:87), (SEQ. ID. NO.:88), (SEQ. ID. NO.:89), (SEQ. ID. NO.:90), (SEQ. ID. NO.:91), or (SEQ. ID. NO.:92), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

79. The method of Claim 73, wherein said oligonucleotide primer is labeled with a fluorescent dye.

80. The method of Claim 79, wherein said dye is SYBR Green I, YO-PRO-1, thiazole orange, Hex, pico green, edans, fluorescein, FAM, or TET.

81. The method of Claim 71, wherein said statin drug is lovastatin, pravastatin, simvastatin, atorvastatin, fluvastatin, or cerivastatin.

82. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting essentially of the nucleotide sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO.:1).

83. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting essentially of the nucleotide sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO.:2).

84. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting of sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO. 1).

85. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting of sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO.:2).

86. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:1), (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32),(SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:40), (SEQ. ID.

NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO.:44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ. ID. NO.:77), (SEQ. ID. NO.:78), or (SEQ. ID. NO.:79).

87. An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, comprising the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) or 5'- ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34).

88. An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, having the sequence 5'-CCT GGG TAA CTG AGC GAG ACT GTG TC-3' (SEQ. ID. NO.:33) or 5'- ATC TGA CCA AGG ATA GTG GGA TAT A-3' (SEQ. ID. NO.:34).

89. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:82), (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:86), (SEQ. ID. NO.:87), (SEQ. ID. NO.:88), (SEQ. ID. NO.:89), (SEQ. ID. NO.:90), (SEQ. ID. NO.:91), or (SEQ. ID. NO.:92).

90. An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer comprising a nucleotide sequence of (SEQ. ID. NO.:95), (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:100), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO.:103), (SEQ. ID. NO.:104), (SEQ. ID. NO.:105), or (SEQ. ID. NO.:106), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Oka reference sequence.

91. (Once Amended) An oligonucleotide primer for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:95), (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:100), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO.:103), (SEQ. ID. NO.:104), (SEQ. ID. NO.:105), or (SEQ. ID. NO.:106).

92. (Once Amended) An oligonucleotide primer set for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, said primer set having a reverse primer consisting essentially of the nucleotide sequence 5'-GCA TCT GCC TTC AGC TAG ACA TTG-3' (SEQ. ID. NO.:1); and a forward primer consisting essentially of the nucleotide sequence 5'-TCT TCC AGA AGG GTG AGA TTC CAA-3' (SEQ. ID. NO.:2).

93. (Once Amended) An oligonucleotide primer set for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, having a forward primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:43), (SEQ. ID. NO.:45), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:65)(SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ. ID. NO.:77), or (SEQ. ID. NO.:79);

and having a reverse primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:1),(SEQ. ID. NO.:10), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:44), (SEQ. ID. NO.:46), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), or (SEQ. ID. NO.:78).

94. An oligonucleotide primer set for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, having a forward primer comprising a nucleotide sequence of (SEQ. ID. NO.:34),(SEQ. ID. NO.:82), (SEQ. ID. NO.:86), (SEQ. ID. NO.:88), (SEQ. ID. NO.:90), or (SEQ. ID. NO.:92), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence;

and having a reverse primer comprising a nucleotide sequence of (SEQ. ID. NO.:33), (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:87), (SEQ. ID. NO.:89), or (SEQ. ID. NO.:91), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence.

95. (Once Amended) An oligonucleotide primer set for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, having a forward primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:82), (SEQ. ID. NO.:86), (SEQ. ID. NO.:88), (SEQ. ID. NO.:90), or (SEQ. ID. NO.:92);

and having a reverse primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:87), (SEQ. ID. NO.:89), or (SEQ. ID. NO.:91).

96. (Once Amended) An oligonucleotide primer set for detecting a genetic predisposition for non-responsiveness to statin drug treatment in a human, having a forward primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:95),(SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO.:104), or (SEQ. ID. NO.:106);

and having a reverse primer consisting essentially of a nucleotide sequence of (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:100), (SEQ. ID. NO.:103), or (SEQ. ID. NO.:105).

97. (Once Amended) A genetic testing kit comprising a primer comprising a nucleotide sequence of (SEQ. ID. NO.:1), (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:10), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32),(SEQ. ID. NO.:33), (SEQ. ID. NO.:34),(SEQ. ID. NO.:35), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:43), (SEQ. ID. NO.:44), (SEQ. ID. NO.:45),(SEQ. ID. NO.:46), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ. ID. NO.:77), (SEQ. ID. NO.:78), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence; and

instructions for using the primer to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.

98. (Once Amended) A genetic testing kit comprising:

a primer comprising a nucleotide sequence of (SEQ. ID. NO.:82), (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:86), (SEQ. ID. NO.:87), (SEQ. ID. NO.:88), (SEQ. ID. NO.:89), (SEQ. ID. NO.:90), (SEQ. ID. NO.:91), or (SEQ. ID. NO.:92), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence; and

instructions for using the primer to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.

99. (Once Amended) A genetic testing kit comprising:

a primer comprising a nucleotide sequence of (SEQ. ID. NO.:95), (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:100), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO.:103), (SEQ. ID. NO.:104), (SEQ. ID. NO.:105), or (SEQ. ID. NO.:106), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Oka reference sequence; and

instructions for using the primer to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.

100. (Once Amended) A genetic testing kit comprising:

a forward primer comprising a nucleotide sequence of (SEQ. ID. NO.:2), (SEQ. ID. NO.:3), (SEQ. ID. NO.:4), (SEQ. ID. NO.:5), (SEQ. ID. NO.:6), (SEQ. ID. NO.:7), (SEQ. ID. NO.:8), (SEQ. ID. NO.:9), (SEQ. ID. NO.:11), (SEQ. ID. NO.:12), (SEQ. ID. NO.:13), (SEQ. ID. NO.:14), (SEQ. ID. NO.:15), (SEQ. ID. NO.:16), (SEQ. ID. NO.:17), (SEQ. ID. NO.:18), (SEQ. ID. NO.:19), (SEQ. ID. NO.:20), (SEQ. ID. NO.:21), (SEQ. ID. NO.:22), (SEQ. ID. NO.:23), (SEQ. ID. NO.:36), (SEQ. ID. NO.:37), (SEQ. ID. NO.:38), (SEQ. ID. NO.:39), (SEQ. ID. NO.:43), (SEQ. ID. NO.:45), (SEQ. ID. NO.:47), (SEQ. ID. NO.:48), (SEQ. ID. NO.:49), (SEQ. ID. NO.:50), (SEQ. ID. NO.:53), (SEQ. ID. NO.:54), (SEQ. ID. NO.:58), (SEQ. ID. NO.:59), (SEQ. ID. NO.:60), (SEQ. ID. NO.:61), (SEQ. ID. NO.:65), (SEQ. ID. NO.:66), (SEQ. ID. NO.:67), (SEQ. ID. NO.:68), (SEQ. ID. NO.:69), (SEQ. ID. NO.:70), (SEQ. ID. NO.:71), (SEQ. ID. NO.:72), (SEQ. ID. NO.:75), (SEQ. ID. NO.:76), (SEQ. ID. NO.:77), or (SEQ. ID. NO.:79), or comprising a sequence overlapping the sequence of any one of these with respect to its position on the Nickerson reference sequence;

a reverse primer comprising a nucleotide sequence of (SEQ. ID. NO.:1),(SEQ. ID. NO.:10), (SEQ. ID. NO.:24), (SEQ. ID. NO.:25), (SEQ. ID. NO.:26), (SEQ. ID. NO.:27), (SEQ. ID. NO.:28), (SEQ. ID. NO.:29), (SEQ. ID. NO.:30), (SEQ. ID. NO.:31), (SEQ. ID. NO.:32), (SEQ. ID. NO.:35), (SEQ. ID. NO.:40), (SEQ. ID. NO.:41), (SEQ. ID. NO.:42), (SEQ. ID. NO.:44), (SEQ. ID.

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NO.:46), (SEQ. ID. NO.:51), (SEQ. ID. NO.:52), (SEQ. ID. NO.:55), (SEQ. ID. NO.:56), (SEQ. ID. NO.:57), (SEQ. ID. NO.:62), (SEQ. ID. NO.:63), (SEQ. ID. NO.:64), (SEQ. ID. NO.:73), (SEQ. ID. NO.:74), or (SEQ. ID. NO.:78), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence; and

instructions for using the forward and reverse primers to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.

101. (Once Amended) A genetic testing kit comprising:

a forward primer comprising a nucleotide sequence of (SEQ. ID. NO.:82), (SEQ. ID. NO.:86), (SEQ. ID. NO.:88), (SEQ. ID. NO.:90), or (SEQ. ID. NO.:92), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence;

a reverse primer comprising a nucleotide sequence of (SEQ. ID. NO.:83), (SEQ. ID. NO.:84), (SEQ. ID. NO.:85), (SEQ. ID. NO.:87), (SEQ. ID. NO.:89), or (SEQ. ID. NO.:91), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Nickerson reference sequence; and

instructions for using the forward and reverse primers to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.

102. (Once Amended) A genetic testing kit comprising:

a forward primer comprising a nucleotide sequence of (SEQ. ID. NO.:95),(SEQ. ID. NO.:98), (SEQ. ID. NO.:99), (SEQ. ID. NO.:101), (SEQ. ID. NO.:102), (SEQ. ID. NO.:104), or (SEQ. ID. NO.:106), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Oka reference sequence;

a reverse primer comprising a nucleotide sequence of (SEQ. ID. NO.:96), (SEQ. ID. NO.:97), (SEQ. ID. NO.:100), (SEQ. ID. NO.:103), or (SEQ. ID. NO.:105), or comprising a sequence overlapping the sequence of any of these with respect to its position on the Oka reference sequence; and

instructions for using the forward and reverse primers to detect a genetic predisposition in a human subject for non-responsiveness to treatment with a statin drug selected from the group consisting of lovastatin, pravastatin, and simvastatin.